

AMENDMENTS TO THE CLAIMS

Claims 1-30 (Canceled).

31. (Previously Presented) A reworked metallic braking rotor or drum having a braking surface adapted to engage a brake pad or brake shoe, respectively, in dry sliding contact and frictional loading characterized in an initial manufacturing process by presence of residual tensile stresses and tooling mark indentations in said braking surface comprising:

an ultrasonically reworked braking rotor or drum presenting a smoothed plastically deformed braking surface introducing increased braking surface contact area.

32. (Previously Presented) The braking rotor or drum of Claim 31 further comprising a compressed sub-surface layer on the braking surface establishing increased wear resistance properties.

33. (Previously Presented) The braking rotor or drum of Claim 32 further comprising a depth of said compressed sub-surface layer exceeding the limits of braking wear depth.

34. (Previously Presented) The braking rotor or drum of Claim 31 wherein said reworked rotor surface further comprises a machined surface established by ultrasonic

impact machining with a set of individual randomly ultrasonically driven indenter elements.

35. (Previously Presented) The braking rotor or drum of Claim 31 wherein the smoothed plastically deformed braking surface has a roughness not exceeding 200 micro-inches.

36. (Canceled).

37. (Previously Presented) An ultrasonically reworked metallic braking rotor or drum having a plastically deformed, smoothed and compressed braking surface.

38. (Canceled).

39. (Previously Presented) The reworked braking rotor or drum of Claim 37 having a surface roughness of less than 200 micro-inches.

40. (Previously Presented) The reworked braking rotor or drum of Claim 37 presenting a uniform stress profile under the braking surface to a depth of 12 mm, thereby ensuring uniform deformation eliminating stress concentration at the surface and reducing possibility of crack development.

41. (Currently Amended) The reworked braking rotor or drum of Claim 37 wherein the braking surface is cast iron with a strength exceeding the yield point of the cast iron prior to reworking.

42. (Previously Presented) The reworked braking rotor or drum of Claim 37 wherein the braking surface has a surface of higher contact area for abutment with the brake lining.

43. (Previously Presented) The reworked braking rotor or drum of Claim 37 wherein the braking surface has a smoother surface finish with better contact surface area with the applied brake lining during operation resulting in less heat build up during brake application providing more efficient braking and a safer application of the brake.

44. (Canceled).

45. (Canceled).